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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,769	02/11/2004	George Kadlicko	04095- P0013A	3058

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EXAMINER	
GILLAN, RYAN P	
ART UNIT	PAPER NUMBER
3746	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/26/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/776,769	KADLICKO, GEORGE	
	Examiner	Art Unit	
	Ryan P. Gillan	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10312006,2112004,8152005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

"Applicant should note that the large number of references in the attached IDS have been considered by the examiner in the same manner as other documents in Office search files are considered by the examiner while conducting a search of the prior art in a proper field of search. **See MPEP 609.05(b).** Applicant is requested to point out any particular references in the IDS which they believe may be of particular relevance to the instant claimed invention in response to this office action."

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 5-11 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hein (3,834,836) in view of Kita (3,498,227). Hein teaches a hydraulic machine comprising a housing 13, a rotary group 33 rotatably mounted within said housing and including barrel 13 and a plurality of pistons 36 axially slideable in cylinders 34 in said barrel, and a swash plate 37 assembly to engage said pistons and induce reciprocation thereof as said barrel rotates in said housing inlet port 27 and an outlet port 29 each of which extends circumferentially in a port plate 12; wherein said barrel is located axially on said shaft by a shoulder (located on at the bottom end of the shaft) formed on said shaft; wherein an actuator 46 acts upon said swashplate to adjust disposition thereof relative to said barrel and thereby adjust the stroke of said pistons in

said barrel (col. 2 lines 45-51); wherein a valve 84 controls flow to said actuator in response to control signals (col. 3 lines 24-34).

3. Hein teaches all ob the above-cited claim limitations, but fails to teach the following claim limitations taught by Kita: a port plate 22 interposed between a barrel 27 and said housing 11a and effective to connect respective ones of said cylinders 32 alternatively with an inlet port 47 and an outlet port 52, said port plate having a face 22a biased into engagement with a sealing face on one of said barrel and said housing and connected to the other of said barrel and said housing by an annular sleeve 41 extending between and in sealing engagement with said port plate and said other of said barrel and said housing (clearly seen in figure 1), whereby upon rotation of said barrel relative to said housing, said faces are maintained in sealing contact by said bias 43 and misalignment between said port plate and said other of said barrel and said housing is accommodated by said annular sleeves 41; said bias is provided by spring sets 43 and includes a plurality of compression springs 43 circumferentially spaced about said port plate (clearly seen in figure 1); said annular sleeves 41 are located within each of said cylinders 32; said sleeves are sealed within said cylinders and are axially slidable relative to said cylinders (col. 4 lines 41-47); a compression spring 43 is located between each pair of adjacent cylinders 32; wherein said springs are located in respective chambers 32 and said chambers are selectively connected to said cylinders as said barrel rotates to balance hydraulic forces imposed by said barrel on said plate (col. 4 lines 34-59); wherein said chambers are connected to said cylinder by a restricted flow path is an orifice in said plate (col. 4 lines 34-59); wherein said bias is

provided by a pair of spring sets 43 acting on said port plate 22 at radially spaced locations. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the compressor taught by Hein to incorporate the port plate, biasing and annular sleeve configuration as a means of providing a high speed high pressure operation that has an improved means for controlling the discharge fluid (col. 1 lines 26-49).

4. Hein in view of Kita discloses the claimed invention except for the biasing springs act between the port plate and the housing instead of between the port plate and the barrel. It would have been obvious to one having ordinary skill in the art at the time the invention was made to switch the position of the spring biases from in between the port plate and barrel to in between the port plate and housing in order to reduce the number of parts attached to the barrel and thus increasing the simplicity of manufacture of the barrel. It has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

5. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hein in view of Kita and Takenaka (6,517,321). Hein in view of Kita teach all of the above cited claim limitations, but fails to teach the following claim limitations taught by Takenaka: one of said spring sets is a conical spring 65 acting at a radially inner location on said port plate 63. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Hein and Kita by incorporating the conical spring taught by Takenaka as a means of restricting the movement of the port plate and providing support thereto (col. 6 lines 35-41).

6. Claims 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hein in view of Kita and Kimura (5,749,710). Hein in view of Kita teach all of the above cited claim limitations, but fails to teach the following claim limitations taught by Kimura: a barrel 13 is mounted on a shaft 7 extending through said housing 2 and secured thereto by a key 12a; a control circuit (col. 7 lines 6-17) having at least one sensed input thereto indicative of a parameter of said rotating group (col. 7 lines 18-26); wherein said sensed input includes rotation of said barrel in said housing (col. 7 lines 6-17); wherein said barrel includes a toothed ring 8 extending about said barrel to co-operate with a sensor 18 in said housing and provide a time varying signal as said barrel rotates (col. 7 lines 18-26). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the actuator as taught by Hein to incorporate the barrel rotation sensing arrangement taught by Kimura as a means of accurately actuating the speed and output of the compressor (col. 8 lines 8-20).

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hein in view of Kita and Budzich (5,205,124). Hein and Kita teach all of the above-cited claim limitations, but fail to teach the following claim limitations taught by Budzich: wherein a hydrodynamic bearing 65 is provided between said port plate 46 and said housing 22. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Hein and Kita to incorporate the hydrodynamic bearing as taught by Budzich as a means of providing a balancing force between the port plate and the housing as well as providing lubrication for higher running efficiency (col. 1 lines 12-61).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan P. Gillan whose telephone number is 571-272-8381. The examiner can normally be reached on 8:30 am - 5:00 pm; Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571-272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RPG

12/19/06

EHUD GARTENBERG
SUPERVISORY PATENT EXAMINER